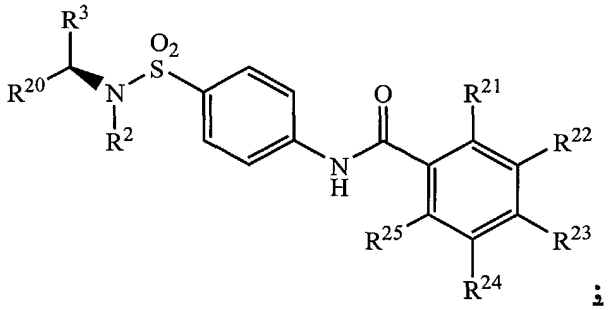
Amended Claims

1. **(currently amended)** A ~~**matrix metalloproteinase inhibiting**~~ compound**; an enantiomer, diastereomer, racemate, or tautomer of the compound; or a salt of the compound, enantiomer, diastereomer, racemate, or tautomer, wherein:**

the compound has ~~**having**~~ the **following** structure:



;

~~**or a salt, an enantiomer, a diastereomer, a racemate, or a tautomer thereof, wherein:**~~

R^2 is ~~**selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, heterocycloalkyl, and heterocycloalkylalkyl**~~ **morpholinylalkyl**;

R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxy, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, haloalkoxy, **and** haloalkylthio~~**, and heterocycloalkyl**~~;

R^{20} is selected from the group consisting of -C(O)OH, -C(O)NHOH, -SH, and -C(O)SH; and

R^{21}, R^{22}, R^{23}, R^{24}, and R^{25} are independently selected from the group consisting of H, C_1 to about C_{20} alkyl, C_1 to about C_{20} alkenyl, C_1 to about C_{20} alkynyl, cycloalkyl, haloalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, nitroalkyl, ~~**heterocycloalkyl,**~~ alkoxy, cycloalkoxy, alkoxycarbonyl, alkoxyalkyl, haloalkoxy, haloalkylthio, alkylamino, and carboxyalkyl.

2. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound**, enantiomer, diastereomer, racemate, tautomer, or salt** of claim 1 wherein R^{20} is selected from the group consisting of -C(O)OH and -C(O)NHOH.

3. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 2 wherein R^{21} and R^{25} are H.

4. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 3 wherein R^{22} and R^{24} are H.

5. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 4 wherein R^{23} is C_1 to about C_{20} alkyl.

6. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 5 wherein R^{23} is C_1 to about C_{20} linear alkyl.

7. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 2 wherein R^{20} is -C(O)OH.

8. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 7 wherein R^3 is selected from the group consisting of alkyl, alkenyl, alkynyl, haloalkoxy, **and** haloalkylthio, ~~**and heterocycloalkyl**~~.

Claim 9 (canceled).

10. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim **8** ~~**9**~~ wherein **R^2** ~~**R^3**~~ is 2-(N-morpholino)ethyl.

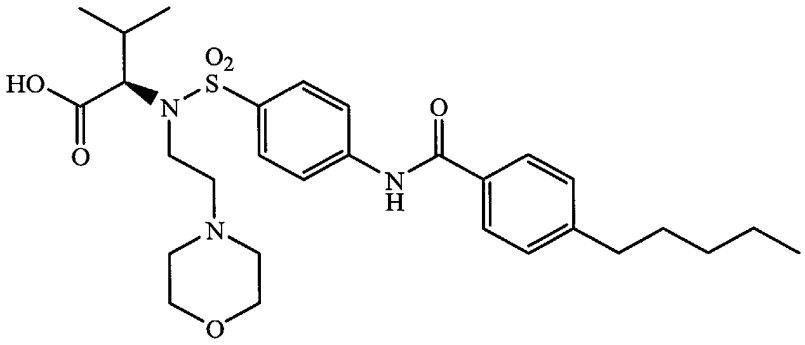
11. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 2 wherein R^{20} is -C(O)NHOH.

12. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 11 wherein R^3 is selected from the group consisting of alkyl, alkenyl, alkynyl, haloalkoxy, **and** haloalkylthio~~, and heterocycloalkyl~~.

Claim 13 (canceled).

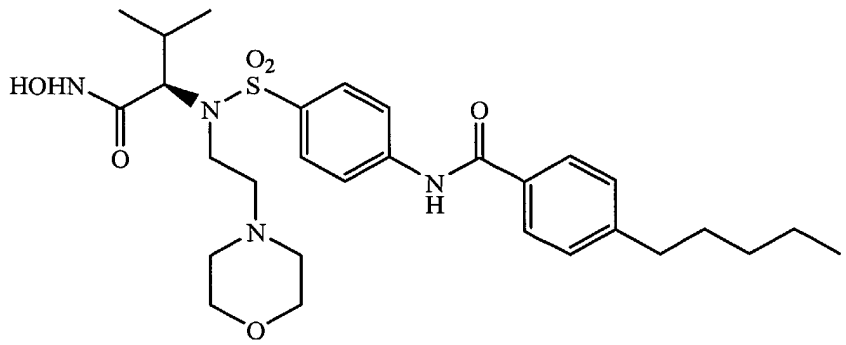
14. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim **12** ~~13~~ wherein **R^2** ~~R^3~~ is 2-(N-morpholino)ethyl.

15. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim **10** ~~14~~ ~~having~~ **wherein** the **compound has the following** structure:



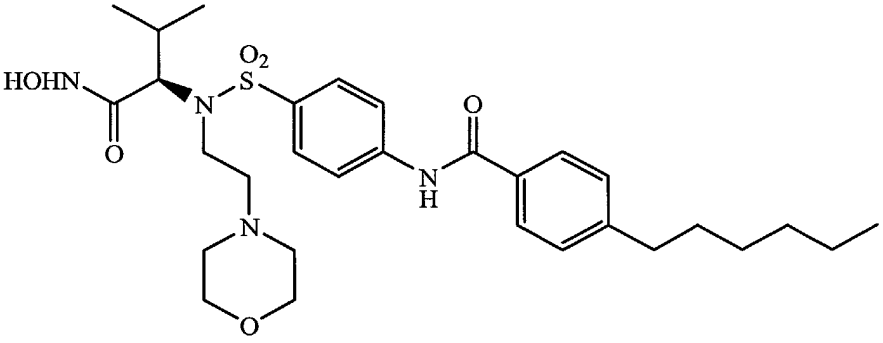
~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

16. **(currently amended)** The ~~**matrix metalloproteinase inhibiting**~~ compound, **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 14 ~~having~~ **wherein** the **compound has the following** structure:



~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

17. **(currently amended)** The ~~matrix metalloproteinase inhibiting~~ compound**,** **enantiomer, diastereomer, racemate, tautomer, or salt** of claim 14 ~~having~~ **wherein** the **compound has the following** structure**:**



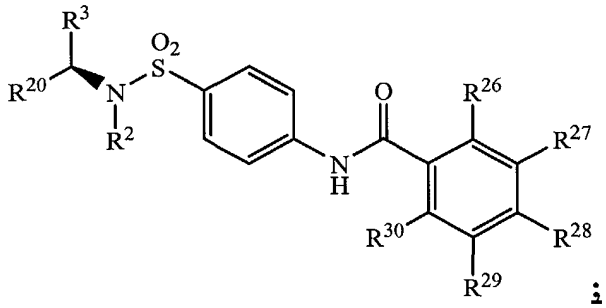
~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

Claim 18 (canceled).

19. **(currently amended)** A method of changing the conformation of a matrix metalloproteinase**,** wherein**:**

the method comprises contacting the matrix metalloproteinase with a compound**; an enantiomer, diastereomer, racemate, or tautomer of the compound; or a salt of the compound, enantiomer, diastereomer, racemate, or tautomer;**

the compound has ~~having~~ the **following** formula:



~~or a salt, an enantiomer, a diastereomer, a racemate, or a tautomer thereof, thereby changing the conformation of the matrix metalloproteinase, wherein:~~;

R^2 is ~~selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, heterocycloalkyl, and heterocycloalkylalkyl~~ morpholinylalkyl;

R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxy, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, haloalkoxy, and haloalkylthio~~, and heterocycloalkyl~~;

R^{20} is selected from the group consisting of -C(O)OH , -C(O)NHOH, -SH, and -C(O)SH; and

R^{26}, R^{27}, R^{28}, R^{29}, and R^{30} are independently selected from the group consisting of about C_3 to about C_{20} alkyl, about C_3 to about C_{20} alkenyl, about C_3 to about C_{20} alkynyl, cycloalkyl, haloalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, nitroalkyl, ~~heterocycloalkyl,~~ alkoxy, cycloalkoxy, alkoxycarbonyl, alkoxyalkyl, haloalkoxy, haloalkylthio, alkylamino, and carboxyalkyl.

20. **(original)** The method of claim 19 wherein R^{20} is selected from the group consisting of -C(O)OH and -C(O)NHOH.

21. **(currently amended)** The method of claim 19 wherein R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, haloalkoxy, and haloalkylthio~~, and heterocycloalkyl~~.

22. **(original)** The method of claim 21 wherein R^3 is a C_1 to about C_{12} alkyl.

23. **(original)** The method of claim 22 wherein R^3 is a C_1 to about C_4 alkyl.

24. **(original)** The method of claim 23 wherein R^3 is isopropyl.

Claim 25 (canceled).

26. **(currently amended)** The method of claim **19** ~~**25**~~ wherein R^2 is 2-(N-morpholino)ethyl.

27. **(original)** The method of claim 19 wherein R^{26} and R^{30} are H.

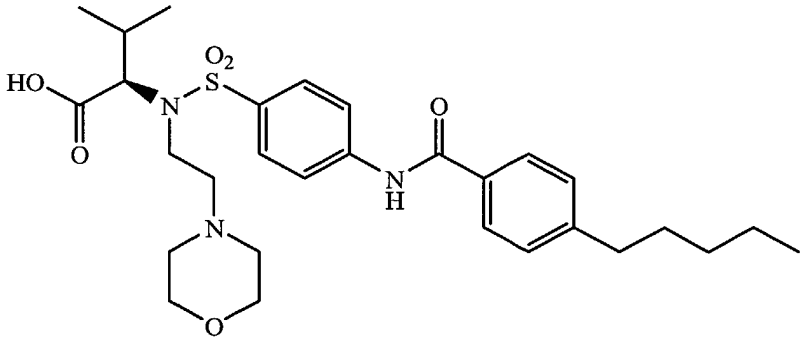
28. **(original)** The method of claim 27 wherein R^{27} and R^{29} are H.

29. **(original)** The method of claim 28 wherein R^{28} is about C_3 to about C_{20} alkyl.

30. **(original)** The method of claim 29 wherein R^{28} is about C_3 to about C_{20} linear alkyl.

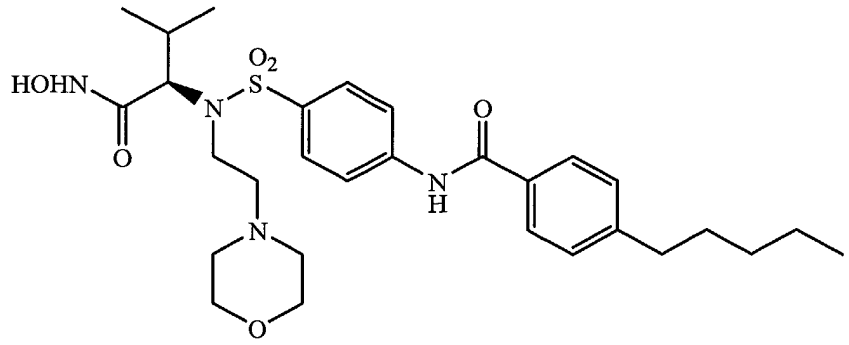
31. **(original)** The method of claim 30 wherein R^{28} is selected from the group consisting of n-propyl, n-butyl, n-pentyl and n-hexyl.

32. **(currently amended)** The method of claim 31 wherein the compound has the **following** structure:



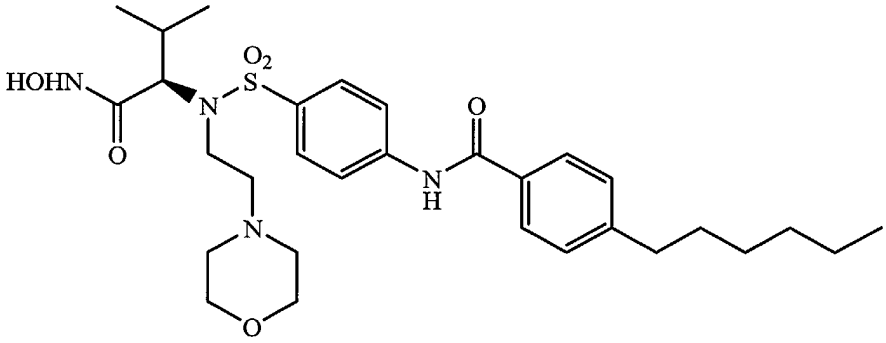
~~**or a salt, an enantiomer, a racemate, or a tautomer thereof**~~.

33. **(currently amended)** The method of claim 31 wherein the compound has the **following** structure:



~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

34. **(currently amended)** The method of claim 31 wherein the compound has the **following** structure:



~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

Claim 35 and 36 (canceled).

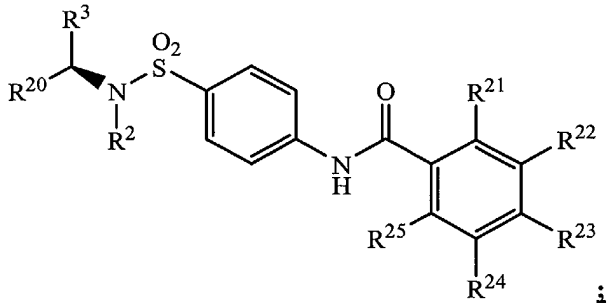
37. **(currently amended)** The method of claim ~~36~~ **19** wherein the matrix metalloproteinase is MMP-8.

38. **(currently amended)** The method of claim ~~36~~ **19** wherein the matrix metalloproteinase is MMP-13.

39. **(currently amended)** A method of inhibiting a matrix metalloproteinase, wherein:

the method comprises contacting the matrix metalloproteinase with a compound**; an enantiomer, diastereomer, racemate, or tautomer of the compound; or a salt of the compound, enantiomer, diastereomer, racemate, or tautomer;**

the compound has ~~having~~ the **following** formula:



~~or a salt, an enantiomer, a diastereomer, a racemate, or a tautomer thereof, thereby inhibiting the matrix metalloproteinase, wherein:~~;

R^2 is ~~selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, heterocycloalkyl, and heterocycloalkylalkyl~~ **morpholinylalkyl**;

R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxy, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, haloalkoxy, **and** haloalkylthio~~, and heterocycloalkyl~~;

R^{20} is selected from the group consisting of -C(O)OH, -C(O)NHOH, -SH, and -C(O)SH; and

R^{21}, R^{22}, R^{23}, R^{24}, and R^{25} are independently selected from the group consisting of H, C_1 to about C_{20} alkyl, C_1 to about C_{20} alkenyl, C_1 to about C_{20} alkynyl, cycloalkyl, haloalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, nitroalkyl, ~~heterocycloalkyl,~~ alkoxy, cycloalkoxy, alkoxycarbonyl, alkoxyalkyl, haloalkoxy, haloalkylthio, alkylamino, and carboxyalkyl.

40. **(original)** The method of claim 39 wherein R^{20} is selected from the group consisting of -C(O)OH and -C(O)NHOH.

41. **(currently amended)** The method of claim 39 wherein R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, haloalkoxy, **and** haloalkylthio~~, and heterocycloalkyl~~.

42. **(original)** The method of claim 41 wherein R^3 is a C_1 to about C_{12} alkyl.

43. **(original)** The method of claim 42 wherein R^3 is a C_1 to about C_4 alkyl.

44. **(original)** The method of claim 43 wherein R^3 is isopropyl.

Claim 45 (canceled).

46. **(currently amended)** The method of claim **39** **45** wherein R^2 is 2-(N-morpholino)ethyl.

47. **(original)** The method of claim 39 wherein R^{21} and R^{25} are H.

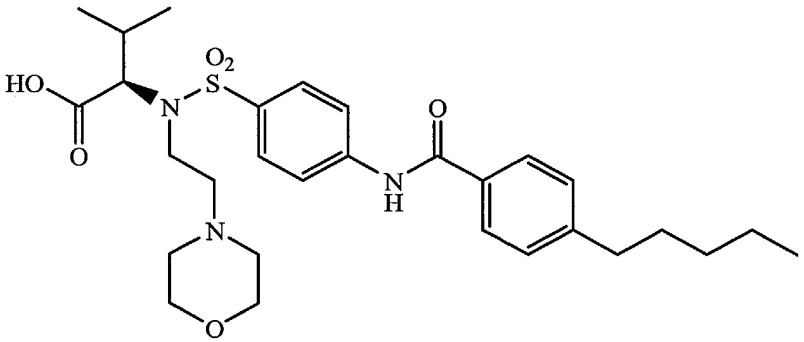
48. **(original)** The method of claim 47 wherein R^{22} and R^{24} are H.

49. **(original)** The method of claim 48 wherein R^{23} is C_1 to about C_{20} alkyl.

50. **(original)** The method of claim 49 wherein R^{23} is methyl or C_2 to about C_{20} linear alkyl.

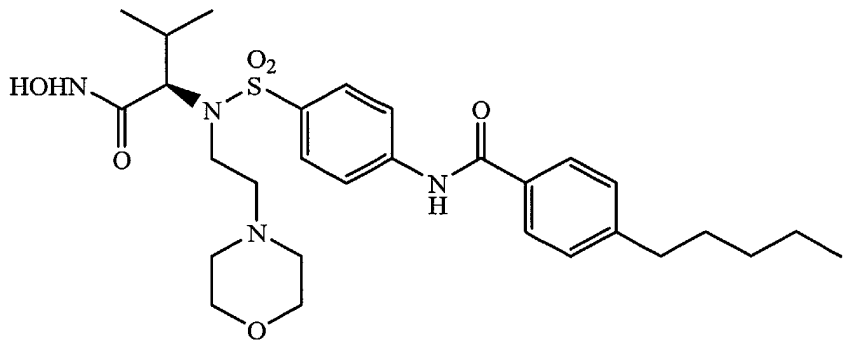
51. **(original)** The method of claim 50 wherein R^{23} is n-pentyl or n-hexyl.

52. **(currently amended)** The method of claim 51 wherein the compound has the **following** structure:



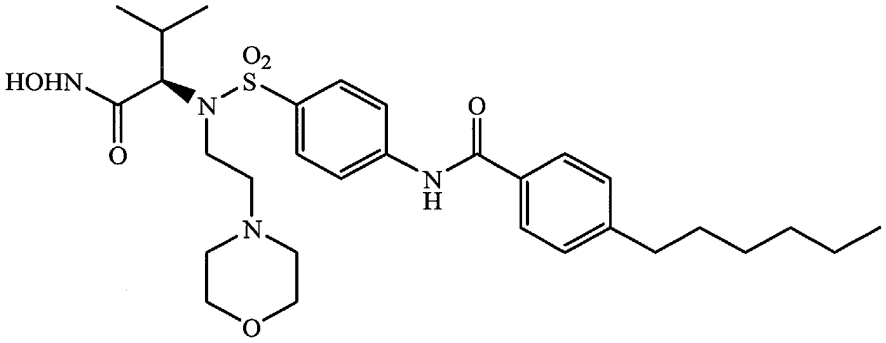
~~**or a salt, an enantiomer, a racemate, or a tautomer thereof**~~.

53. **(currently amended)** The method of claim 51 wherein the compound has the **following** structure:



~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

54. **(currently amended)** The method of claim 51 wherein the compound has the **following** structure:



~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

Claim 55 and 56 (canceled).

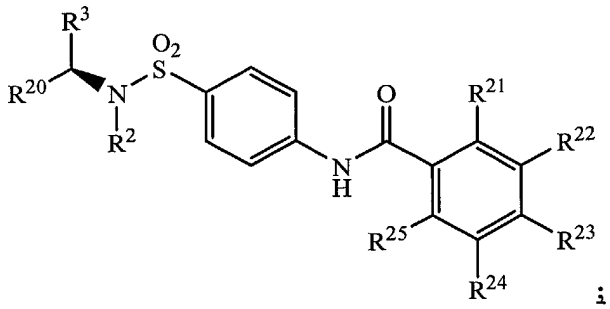
57. **(currently amended)** The method of claim ~~56~~ **39** wherein the matrix metalloproteinase is MMP-8.

58. **(currently amended)** The method of claim ~~56~~ **39** wherein the matrix metalloproteinase is MMP-13.

59. **(currently amended)** A method treating osteoarthritis in a mammal, wherein:

the method comprises providing to the mammal an osteoarthritis-treating-effective amount of a compound**; an enantiomer, diastereomer, racemate, or tautomer of the compound; or a salt of the compound, enantiomer, diastereomer, racemate, or tautomer;**

the compound has ~~having~~ the **following** formula:



~~or an enantiomer, diastereomer, racemate, or tautomer thereof, thereby treating osteoarthritis, wherein:~~;

R^2 is ~~selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, heterocycloalkyl, and heterocycloalkylalkyl~~ **morpholinylalkyl**;

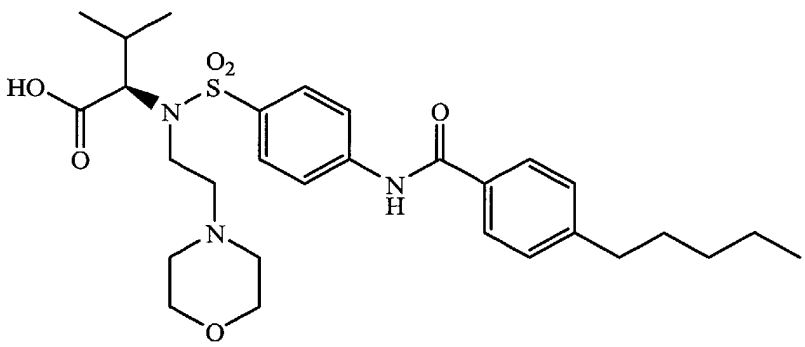
R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxy, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, haloalkoxy, **and** haloalkylthio~~, and heterocycloalkyl~~;

R^{20} is selected from the group consisting of -C(O)OH, -C(O)NHOH, -SH, and -C(O)SH; and

R^{21}, R^{22}, R^{23}, R^{24}, and R^{25} are independently selected from the group consisting of H, C_1 to about C_{20} alkyl, C_1 to about C_{20} alkenyl, C_1 to about C_{20} alkynyl, cycloalkyl, haloalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, nitroalkyl, ~~heterocycloalkyl,~~ alkoxy, cycloalkoxy, alkoxycarbonyl, alkoxyalkyl, haloalkoxy, haloalkylthio, alkylamino, and carboxyalkyl.

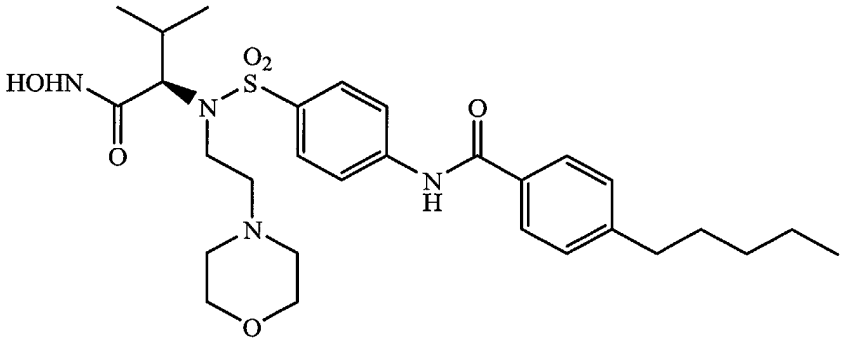
60. **(original)** The method of claim 59 wherein the mammal is a human.

61. **(currently amended)** The method of claim 60 wherein the compound has the **following** structure:



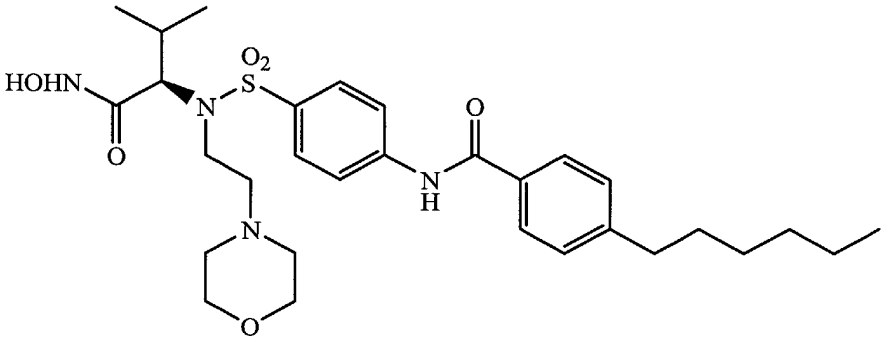
~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

62. **(currently amended)** The method of claim 60 wherein the compound has the **following** structure:



~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

63. **(currently amended)** The method of claim 60 wherein the compound has the **following** structure:



~~or a salt, an enantiomer, a racemate, or a tautomer thereof~~.

Claim 64 (canceled).